

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: specification is replete with non-idiomatic language, rendering the disclosure awkward and confusing. For example, "Besides the fact" (p. 1, line 29), "high direction shots" (p. 4, line 13), etc. Appropriate correction is required.
3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. Claims 9-15 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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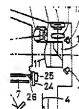
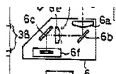
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohtani, Pub. No. US 2002/0048456 (hereafter referred to as 'Ohtani').

7. Regarding Claim 1, Ohtani discloses a camera (Fig. 1) comprising

- at least two light detection elements (Fig. 1, [6f]); p. 4, ¶ [0087], "line sensor 6f formed of a plurality of CCDs") connected to a threshold comparison means (Fig. 1, [6]); p. 4, ¶ [0087], "...well-known phase-difference system");
- a warning device (Fig. 1, [24]; Fig. 5B, [811]; p. 17, ¶ [0239], "the CPU produces electronic beeps...") controlled by the comparison means for emitting a warning if a light difference between two light detection elements exceeds a set value.



8. Regarding Claim 2, Ohtani discloses the light detection element comprises at least one light measuring cell (p. 4, ¶ [0087], "line sensor 6f formed of a plurality of CCDs").

9. Regarding Claim 9, Ohtani discloses the warning device is a warning device selected from the group comprising light, and/or audible, and/or mechanical warning devices (Fig. 1, [24]; Fig. 5B, [811]; p. 17, ¶ [0239], "the CPU produces electronic beeps...").

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani in view of Meulenbrugge et al., U.S. Patent No. 5,530,238 (hereafter referred to as 'Meulenbrugge').

13. Regarding Claim 7, Ohtani teaches the invention as claimed above including a computer unit (Fig. 7A, [100]). Ohtani does not teach the threshold comparison means comprises a multiplexing unit and an analog-digital converter. Meulenbrugge teaches that image detection devices utilize multiplexing circuits (Fig. 1, [11]) and analog-to-digital converters (Fig. 1, [21]) in the standard course of operation. In order to accurately process luminance data from a detector, several manipulation steps are performed as standard practice, according to Meulenbrugge, including multiplexing to speed up processing time and a/d conversion to transform the signal into something that may be

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easily manipulated. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the processing components taught by Meulenbrugge in the invention taught by Ohtani for the purpose of standardizing image processing.

14. Regarding Claim 8, Ohtani in view of Meulenbrugge teaches the invention as claimed above. Ohtani further teaches the computer unit is a microprocessor. (p. 7, ¶ [0112], "central processing unit... of a microcomputer").



15. Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani in view of Meulenbrugge.

16. Regarding Claim 3, Ohtani teaches the invention as claimed above. Ohtani does not teach the light measuring cell comprises a capacitance element, a resistance element, a photodiode, and an amplifier to transform a quantity of light received by the cell into an electrical parameter at the output. Meulenbrugge teaches that image detecting devices contain semiconductor elements (col. 4, line 39), capacitors (Fig. 1, [3]), photodiodes (Fig. 1, [2]) and amplifiers (Fig. 1, [10]). Meulenbrugge does not specifically teach a resistor. However, a resistor is inherent in the teaching given the fact that all of these elements are disposed in a semiconductor and by definition a semiconductor is not a conductor or an insulator. Though Ohtani is silent as to the presence of the individual elements of the detector design, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to

incorporate the elements taught by Meulenbrugge in the invention taught by Ohtani as these components are common to detector design in general. A person of ordinary skill in the art would recognize that the type of signal manipulations regularly performed by cameras in order to compensate for focus, motion and the like requires the specific elements taught by Meulenbrugge.

17. Regarding Claim 7, Ohtani in view of Meulenbrugge teaches the invention as claimed above. Ohtani does not teach the threshold comparison means comprises a multiplexing unit, an analog-digital converter, and a computer unit. Meulenbrugge teaches that image detection devices utilize multiplexing circuits (Fig. 1, [11]) and analog-to-digital converters (Fig. 1, [21]) in the standard course of operation. In order to accurately process luminance data from a detector, several manipulation steps are performed as standard practice, according to Meulenbrugge, including multiplexing to speed up processing time and a/d conversion to transform the signal into something that may be easily manipulated. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the processing components taught by Meulenbrugge in the invention taught by Ohtani for the purpose of standardizing image processing.

18. Regarding Claim 8, Ohtani in view of Meulenbrugge teaches the invention as claimed above. Ohtani further teaches the computer unit is a microprocessor. (p. 7, ¶ [0112], "central processing unit... of a microcomputer").

19. Regarding Claim 4, Ohtani teaches the invention as claimed above. Ohtani does not teach a summing means connected between the light measuring cell and the

threshold comparison means. Meulenbrugge teaches a summing means (col. 3, lines 1-2) used to transform the original signal into a weighted sum before further processing. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the summing means taught by Meulenbrugge in the invention taught by Ohtani for the purpose of producing an output to the comparison means that had a standard frame of reference and was therefore easily comparable.

20. Regarding Claim 5, Ohtani in view of Meulenbrugge teaches the invention as claimed above. Ohtani teaches that the comparison means is a focus detecting device (Fig. 1, [6]) employing a well known phase difference comparison system (p. 4, ¶ [0087]). Meulenbrugge teaches the amplifier is a component of the device in general (Fig. 1, [10]).

21. Regarding Claim 6, Ohtani in view of Meulenbrugge teaches the invention as claimed above. Ohtani further teaches the comparator is connected to a computer (Fig. 7, [100]).

22. Regarding Claim 7, Ohtani teaches the invention as claimed above. Ohtani does not teach the threshold comparison means comprises a multiplexing unit, an analog-digital converter, and a computer unit. Meulenbrugge teaches that image detection devices utilize multiplexing circuits (Fig. 1, [11]) and analog-to-digital converters (Fig. 1, [21]) in the standard course of operation. In order to accurately process luminance data from a detector, several manipulation steps are performed as standard practice, according to Meulenbrugge, including multiplexing to speed up processing time and a/d conversion to transform the signal into something that may be easily manipulated. It

would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the processing components taught by Meulenbrugge in the invention taught by Ohtani for the purpose of standardizing image processing.

23. Regarding Claim 8, Ohtani in view of Meulenbrugge teaches the invention as claimed above. Ohtani further teaches the computer unit is a microprocessor. (p. 7, ¶ [0112], "central processing unit... of a microcomputer").

Allowable Subject Matter

24. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

25. Claims 10-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

26. The following is a statement of reasons for the indication of allowable subject matter: the limitations in Claims 10-15 of the specific placement of the light measuring sensors. These placement limitations, in combination with the details of the sensor functions, limit the scope of the claims to the invention specifically disclosed so as to exclude other camera functions which utilize similar devices, such as auto-focus devices or motion correction devices.

27. The Examiner notes that the scope of Claims 14 and 15 are only allowable if they depend from one of Claims 10-13.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yoshida et al., U.S. Patent Nos. 6,464,411 and 6,648,523.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AUTUMN PARKER whose telephone number is (571)270-3916. The examiner can normally be reached on Mon-Thurs, 8:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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18 Jun 2008

/Patrick J Assouad/

Supervisory Patent Examiner, Art Unit 2862